

Notice of Allowability

Application No.

09/935,400

Examiner

Chuong D Ngo

Applicant(s)

BREDIN ET AL.

Art Unit

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to papers filed on 08/23/2001.
2. ☒ The allowed claim(s) is/are 1-11.
3. ☒ The drawings filed on 23 August 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 20040609.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Chuong D Ngo
Primary Examiner
Art Unit: 2124

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EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with applicant's representative, Mr. Robert M. Carwell on 06/09/2004.

The application has been amended as follows:

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Claim 11 has been replaced by the following claim:

11. A non-integer fractional dividing method for dividing a reference clock signal 'Fvco' of period 'P' by a non-integer ratio 'K', the non-integer ratio being decomposed into an integer part 'I' and a non-integer part 'X', the method comprising:

receiving an identical plurality 'N' of clock signals 'Fvco_0 to Fvco_(N-1)', each clock signal having a period of 'P' and being equally phase shifted by a 'P/N' delay one over the other and wherein the first clock signal 'Fvco_0' being in phase with the reference clock signal;

selecting a first clock signal 'PHI1' and a second clock signal 'PHI2' from the plurality 'N' of clock signals;

detecting the end of a (I- i) th period, wherein 'i' is a predetermined value;

combining said first and second selected clock signals (PHI1, PHI2) to generate a clock signal 'Clock' being phase shifted by the non-integer part value 'X' of the non-integer ratio;
and

dividing the shifted clock signal by the integer part 'I' of the non-integer ratio.

3. The following is an examiner's statement of reasons for allowance:

The prior art of record does not teach or fairly suggest a frequency divider for dividing a reference clock signal of period P by a non-integer fractional ratio K , including: first and second receiving means for receiving a plurality N of clock signals, each having a period of P and being equally phase shifted by a P/N delay one over the other, means for selecting a first clock signal a second clock signal from the first and second receiving means; means for detecting the end of a $(I-i)$ th period, wherein i is a predetermined value; means for combining said first and second selected clock signals to generate a clock signal being phase shifted by the non-integer part of the ratio; and means for dividing the shifted clock signal by the integer part of ratio as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong D Ngo whose telephone number is (703) 305-9764. The examiner can normally be reached on Tuesday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703) 309-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chuong D Ngo
Primary Examiner
Art Unit 2124

06/10/04

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